

1           1.    A method comprising:  
2                forming a protective coating on an exposed  
3 surface of an electronic device, including forming the  
4 protective coating on a conductive termination connected to  
5 a circuit element in the electronic device; and  
6                making a window in the protective coating to  
7 expose the termination.

1           2.    The method of claim 1 wherein the coating is  
2 uniform in thickness.

1           3.    The method of claim 1 wherein the coating  
2 conforms to the geometric configuration of the electronic  
3 device.

1           4.    The method of claim 1 wherein coating the  
2 electronic device comprises vapor deposition.

1           5.    The method of claim 1 wherein the protective  
2 layer comprises a polymer.

1           6.    The method of claim 5 wherein the polymer  
2 comprises poly-para-xylylene.

1           7.    The method of claim 1 wherein the electronic  
2 device comprises an integrated power device (IPD).

1           8.    The method of claim 1 wherein the circuit  
2 element comprises a semiconductor.

1           9.    The method of claim 1 wherein the circuit  
2 element comprises a power semiconductor.

1           10. The method of claim 1 wherein making a window  
2 in the protective coating comprises using a laser to remove  
3 the protective coating.

1 {           11. The method of claim 10 wherein the laser  
2 comprises a stroke marking laser.

1 {           12. The method of claim 10 wherein the laser  
2 comprises a mask marking laser.

1 {           13. The method of claim 10 wherein the laser  
2 comprises a fixed-beam laser.

1           14. The method of claim 10 wherein making a window  
2 in the protective coating comprises using a predetermined  
3 pattern.

1           15. The method of claim 14 wherein the  
2 predetermined pattern comprises a pattern of parallel  
3 strokes for removing strips of the protective coating.

1           16. The method of claim 1 wherein making a window  
2 in the protective coating comprises making a perimeter cut  
3 with a laser to outline the area of the protective coating  
4 to be removed and removing the outlined area of the  
5 protective coating.

1           17. The method of claim 16 wherein removing the  
2 outlined area of protective coating comprises peeling the  
3 protective coating away from the surface of the electronic  
4 device.

1           18. The method of claim 17 wherein peeling the  
2 protective coating comprises passing a gas over the surface  
3 of the protective coating until the protective coating  
4 dislodges from the electronic device.

1           19. The method of claim 18 wherein the gas  
2 comprises compressed air.

1           20. The method of claim 18 wherein the gas  
2 comprises an inert gas.

1           21. The method of claim 1 further comprising:  
2                 applying solder to the portion of the  
3 conductive termination exposed by the window in the  
4 protective coating.

1           22. The method of claim 21 wherein applying solder  
2 comprises reflow soldering.

1           23. The method of claim 1 further comprising:  
2                 encapsulating the electronic device in a  
3 potting material.

1           24. The method of claim 23 wherein the potting  
2 material comprises a silicone resin.

1           25. The method of claim 23 wherein the potting  
2 material comprises polyurea.

1           26. A method comprising:  
2           forming a protective coating of poly-para-  
3 xylylene on an exposed surface of an integrated power  
4 device, including forming the protective coating on a  
5 conductive termination connected to a semiconductor in the  
6 power device; and  
7           cutting a window in the protective coating  
8 using a laser to expose the termination.

1           27. A method comprising:  
2           forming a protective coating on an exposed  
3 surface of an electronic device, including forming the  
4 protective coating on a conductive termination connected to  
5 a circuit element in the electronic device;  
6           making a window in the protective coating to  
7 expose the termination;  
8           applying solder to the portion of the  
9 conductive termination exposed by the window in the  
10 protective coating; and  
11           encapsulating the electronic device in a  
12 potting material.

1           28. A method for use with an electronic device  
2 having a conductive termination pad and an electronic  
3 component connected to the pad, the method comprising:  
4           applying a protective coating to surfaces of  
5 the termination pad and the electronic component;  
6           cutting a window in the protective coating to  
7 expose the termination pad; and  
8           flowing solder into the window to make  
9 electrical connection between the solder pad and a circuit.

1       29. A circuit comprising:  
2           a circuit board;  
3           an electronic device comprising  
4               a substrate,  
5               a conductive termination pad formed on the  
6       substrate,  
7           an electronic component mounted on the  
8       substrate and connected to the termination pad,  
9           a protective coating on the pad and the  
10      electronic component, and  
11           a window formed in the protective coating  
12      to expose the conductive termination pad; and  
13           solder connecting the termination pad to the  
14      circuit board via the window.

1       30. An apparatus comprising:  
2           an electronic device;  
3           a protective, conformal coating on the surface  
4      of the electronic device containing conductive terminations;  
5      and  
6           a window in the protective coating to expose  
7      the conductive terminations.